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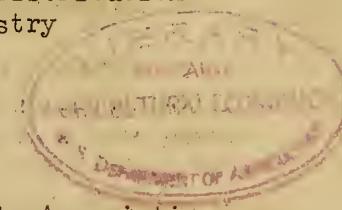
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UNITED STATES DEPARTMENT OF AGRICULTURE  
Agricultural Marketing Service

The Utilization of Capacity and the Production and Distribution  
of Products by the Cottonseed Crushing Industry

By G. S. Meloy, Senior Marketing Specialist

Address, Convention of the National Cottonseed Products Association,  
New Orleans, La., May 19-21, 1941



Mr. President, and  
Members of the National Cottonseed Products Association:

At your convention last year it was my pleasure to present a paper which I called "Some Economic Aspects of Present Cottonseed-Crushing Mill Establishments." At this convention I should like to carry that thought a little further by presenting a few facts of your industry as I have compiled them, principally from the statistics published by the Bureau of the Census and the U. S. Department of Agriculture, and then by showing a few graphs based on those facts.

As background information I have first calculated the tonnage of seed which you are prepared to crush. Although I do not have the exact figures as to the number of available presses, I am informed that there have been above 3,000 each year during the past 5 years and that each press has a daily capacity of 15 tons of seed.

If we allow 25 working days for each of the 31-day months, except December, allowing 20 days for that month as appears to be the general custom among oil mills, then 24 days for each 30-day month, and 22 days for February, we have available 288 working days per annum. Three thousand presses at 15 tons per day, working 288 days per annum, provide a total capacity of 12,960,000 tons.

The monthly distribution of this capacity is shown in table 1; in the third column, the average crush of seed each month during the 5 years, 1935-39 is given, and in the fourth column, the percentage of the available capacity utilized each month on the average. Graph No. 1 illustrates the monthly utilization of capacity. The shaded portion is that part of the whole capacity not utilized, and amounts to 64.1 percent of the total. I do not believe that the crushing of peanuts and soybeans by a few of the mills will shrink this shaded area of nonutilized capacity very much, but separate figures on the pressing of these products by cottonseed-oil mills are not available to me. The total peanut crush during the 5-year period averaged

approximately 82,468 tons. If all this quantity had been crushed by the cottonseed-oil mills, which it was not, you would have increased your utilization of capacity by about 0.6 of 1 percent.

These figures are based on milling conditions as of the years 1935-39. A slightly better economic showing will result from a 5-day week. The available days per annum will be reduced from 288 to 255. The total press capacity per annum accordingly will drop from 12,960,000 tons to 11,475,000 tons. The annual percentage of capacity utilized will be increased from 35.9 percent to 40.6 percent and the unutilized portion of the capacity therefore will be reduced from 64.1 percent to 59.4 percent.

The Bureau of the Census reports the receipts of seed by the mills together with the crush by months.

Table 2 shows the 5-year average of the receipts and crushings, together with the monthly percentage of the average annual receipts and crushings. During the 5-year period, the average receipts totaled 4,643,935 tons and the crush, 4,652,615 tons or 100.18 percent of the receipts. The average carry-overs show that this extra crush came out of the carry-over. Graph No. 2 illustrates the receipts and crushings by monthly percentages of the whole.

By the end of December there was an average cumulative receipt of seed of 85 percent of the annual total, and by the end of March, 89 percent of the average annual crushings had been completed.

So much has been rumored about the holding of oil for a spring rise in the price, that in spite of the fact that it is shown in U. S. Department of Agriculture Technical Bulletin 737 entitled "Wholesale Prices of Fats and Oil in the United States: Index Numbers, 1910-39", that there is no regularity in seasonal movement for cottonseed-oil prices over an extended period. I have made a few calculations to see just what were the actual price conditions during the 5-year period 1935-39.

Table 3 gives the 5-year average monthly production of cotton-seed oil, the monthly percentage of oil produced each month, the average pounds of oil shipped each month, the monthly percentage of the annual total, and the average monthly price of prime crude in the Southeast.

Graph No. 3 illustrates these items. You will note how little lag there is between production and shippings; also, that during the 5 years 1935-39, the average price of oil dropped in February and declined each month from March until June. The July price shows an average rise, due probably to new crop prospects and consumption factors. There was a slight increase in the average carry-over of oil amounting to 0.04 of 1 percent of the average annual production.

Table 4 shows the average monthly production of cake and meal, the monthly percentage of total production, the monthly average tonnage of shipments, the monthly percentage of the total shipments, and the monthly average price of 41 percent protein meal at Memphis.

During the 5 years there was a reduction in the average carry-over of 1.14 percent of the average production.

Graph No. 4 illustrates the monthly relation between production and shipments of cake and meal, and contains a curve showing the monthly average price of meal during the 5-year period. You will note that after the average drop in the price during February, there was a rise in the price for March, April, and May, followed by a decline in June and a rise in July. In this connection it should be noted that by the end of February, 75 percent of the annual shipments had been made, and that the July rise brought out only 3,401 tons over the June shipments, and that only 3.19 percent of the average annual totals were shipped that month.

In table 5 the production and shipments of linters have been similarly compared. The carry-over of linters was increased by 1.03 percent of the total average production. The graph -- No. 5 -- does not indicate an undue lag in distribution over production.

In table 6 the production and movement of hulls have been similarly compared and graph No. 6 illustrates the results. The demand for hulls is apparently seasonal, being greatest in the late fall and winter, just as is the demand for cake and meal.

I believe that you will agree with me that these data and graphs indicate that on the average, you cottonseed crushers are getting rid of your products about as fast as you can, after producing them. And also, that during this particular 5-year period, if you had held your oil for a spring rise, you would have lost and the loss might have been even greater than indicated by the graph, since the extra hold-over may have further depressed the price. This is particularly interesting since the average value of the oil during the period studied represented nearly 56 percent of the combined value of all products.

Table 1.- Average monthly utilization of capacity  
by cottonseed crushing mills, 1935-39

Month	Avail-	Monthly		Percent
	able	capacity	Monthly	of
	work	3,000 presses	crush	capacity
	days	@ 15 tons		used
	Days	Tons	Tons	Percent
August	25	1,125,000	161,447	14.35
September	24	1,080,000	584,893	54.15
October	25	1,125,000	765,745	68.06
November	24	1,080,000	694,624	64.32
December	20	900,000	601,650	66.85
January	25	1,125,000	544,469	48.40
February	22	990,000	439,716	44.42
March	25	1,125,000	359,223	31.93
April	24	1,080,000	215,652	19.97
May	25	1,125,000	137,014	12.18
June	24	1,080,000	85,452	7.92
July	25	1,125,000	62,730	5.58
Total	288	12,960,000	4,652,615	35.90

Table 2.- Average monthly receipts and crushings  
of cottonseed, 1935-39

Month	Monthly	Total	Monthly	Total
	seed	receipts	crush	crush
	receipts			
	Tons	Percent	Tons	Percent
August	268,136	5.78	161,447	3.47
September	1,192,628	25.68	584,893	12.57
October	1,224,258	26.36	765,745	16.45
November	776,022	16.71	694,624	14.92
December	491,104	10.58	601,650	12.93
January	240,917	5.19	544,469	11.70
February	161,404	3.48	439,716	9.46
March	114,084	2.46	359,223	7.72
April	49,425	1.06	215,652	4.64
May	45,274	0.97	137,014	2.95
June	41,510	0.89	85,452	1.84
July	39,173	0.84	62,730	1.35
Total	4,643,935	100.00	4,652,615	100.00
			100.18% of	
			production	

Table 3.- Average monthly production and shipments of cottonseed oil and average prices, 1935-39

Month	Monthly	Monthly	Monthly	Monthly	Monthly	Average
	production	shipments	percent of annual	percent of annual	percent of annual	price per pound
	<u>Pounds</u>	<u>Pounds</u>	<u>Percent</u>	<u>Percent</u>	<u>Cents</u>	
August	47,992,183	40,685,995	3.32	2.82	7.21	
September	175,652,495	144,986,528	12.15	10.04	7.24	
October	233,220,657	215,871,113	16.14	14.95	7.21	
November	212,636,841	203,534,268	14.72	14.09	7.19	
December	184,344,572	188,210,131	12.76	13.03	7.52	
January	168,618,146	161,183,642	11.67	11.18	7.48	
February	138,254,433	140,919,808	9.56	9.76	7.34	
March	113,141,336	123,706,543	8.05	8.91	7.38	
April	71,739,518	82,549,702	4.96	5.72	7.24	
May	46,644,392	63,167,413	3.22	4.37	6.94	
June	23,389,751	44,300,423	2.00	3.07	6.73	
July	20,606,719	29,848,120	1.45	2.06	6.88	
Total	1,444,771,043	1,444,256,391	100.00	100.00		
		99.96% of production				

Table 4.- Average monthly production and shipments of cottonseed cake and meal, and average price, 1935-39

Month	Monthly	Percent	Monthly	Percent	Average
	production	of annual	shipments	of annual	price
	<u>Tons</u>	<u>Percent</u>	<u>Tons</u>	<u>Percent</u>	<u>Dollars</u>
August	72,332	3.44	85,809	4.04	24.95
September	257,705	12.26	210,975	9.93	25.94
October	343,963	16.37	289,609	13.63	24.23
November	312,562	14.88	284,304	13.38	25.50
December	270,041	12.85	253,496	11.93	26.07
January	244,085	11.62	243,383	11.45	26.36
February	202,786	9.56	218,409	10.28	24.71
March	163,591	7.79	193,075	9.08	25.95
April	100,666	4.79	131,393	6.18	27.39
May	65,535	3.12	82,509	3.88	27.14
June	40,283	1.92	64,340	3.03	25.24
July	29,518	1.40	67,741	3.19	28.80
Total	2,101,070	100.00	2,125,043	100.00	
		101.14% of production			

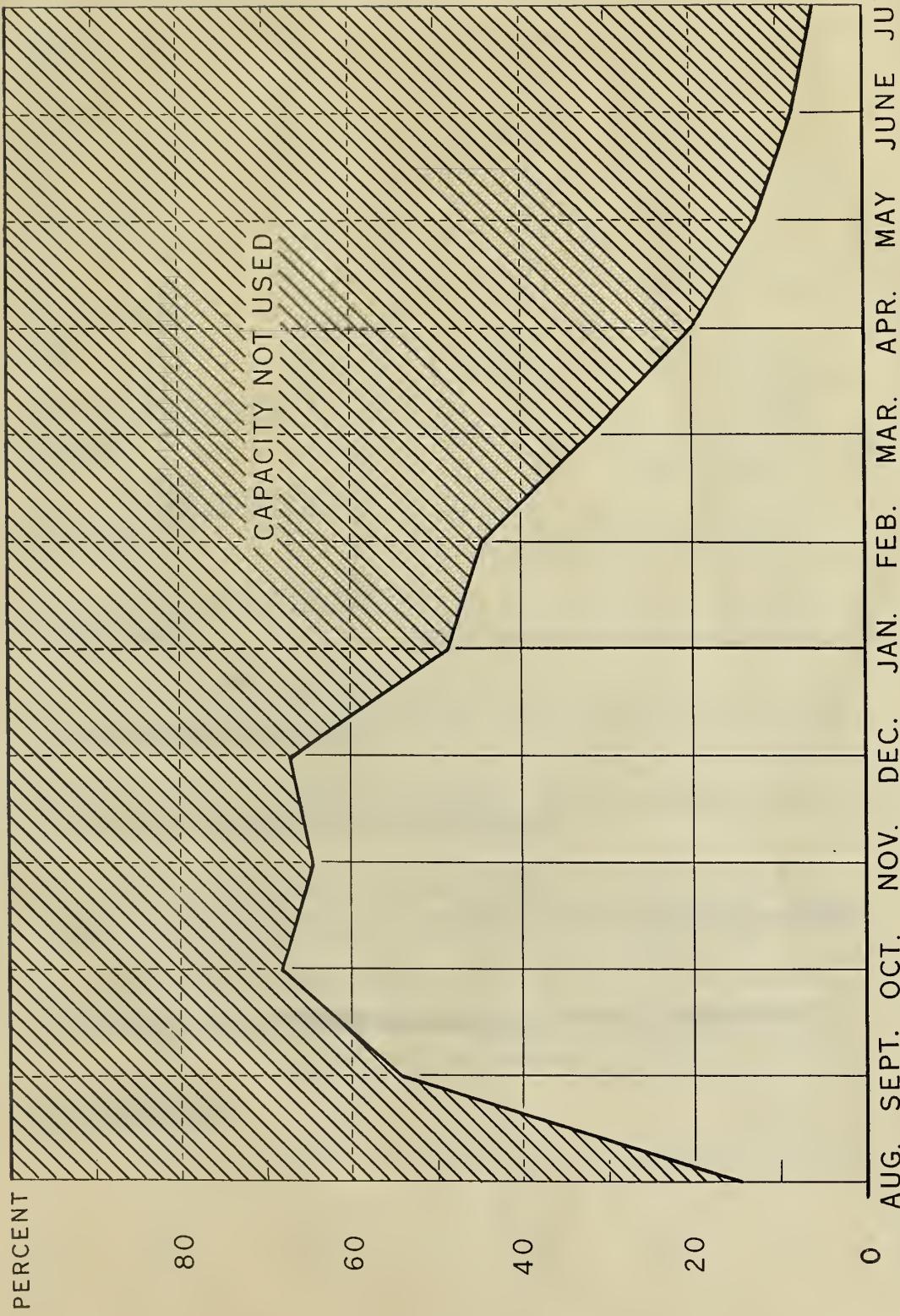
Table 5.- Average monthly production and shipments  
of linters, 1935-39

Month	Linters	Total	Bales	Percent
	produced	production	sold	of sales
	<u>Bales</u>	<u>Percent</u>	<u>Bales</u>	<u>Percent</u>
August	34,861	3.08	54,882	4.90
September	134,451	11.88	88,173	7.87
October	181,160	16.00	148,382	13.25
November	167,035	14.76	137,558	12.28
December	145,204	12.84	127,061	11.35
January	134,630	11.90	112,377	10.03
February	110,154	9.73	104,656	9.34
March	91,526	8.09	95,257	8.50
April	56,880	5.02	68,633	6.13
May	36,533	3.23	62,671	5.59
June	23,001	2.03	59,190	5.28
July	16,318	1.44	61,404	5.48
Total	1,131,853	100.00	1,120,244	100.00
			92.97% of	
			production	

Table 6.- Average monthly production and shipments  
of cottonseed hulls, 1935-39

Month	Average	Percent	Average	Monthly
	pro- duction	of production		percent of sales
	<u>Tons</u>	<u>Percent</u>	<u>Tons</u>	<u>Percent</u>
August	42,528	3.56	43,902	3.64
September	152,588	12.77	121,359	10.06
October	193,430	16.19	162,496	13.48
November	176,909	14.81	154,855	12.84
December	153,796	12.87	143,131	11.87
January	138,782	11.62	142,893	11.85
February	112,108	9.38	133,301	11.05
March	94,032	7.87	100,102	8.96
April	56,553	4.73	70,739	5.87
May	35,726	2.99	50,166	4.16
June	22,242	1.36	39,386	3.27
July	16,061	1.34	35,563	2.95
Total	1,194,755	100.00	1,205,893	100.00
			100.93% of	
			production	

AVERAGE MONTHLY PERCENTAGE OF CRUSHING CAPACITY  
UTILIZED BY COTTONSEED OIL MILLS, 1935-39

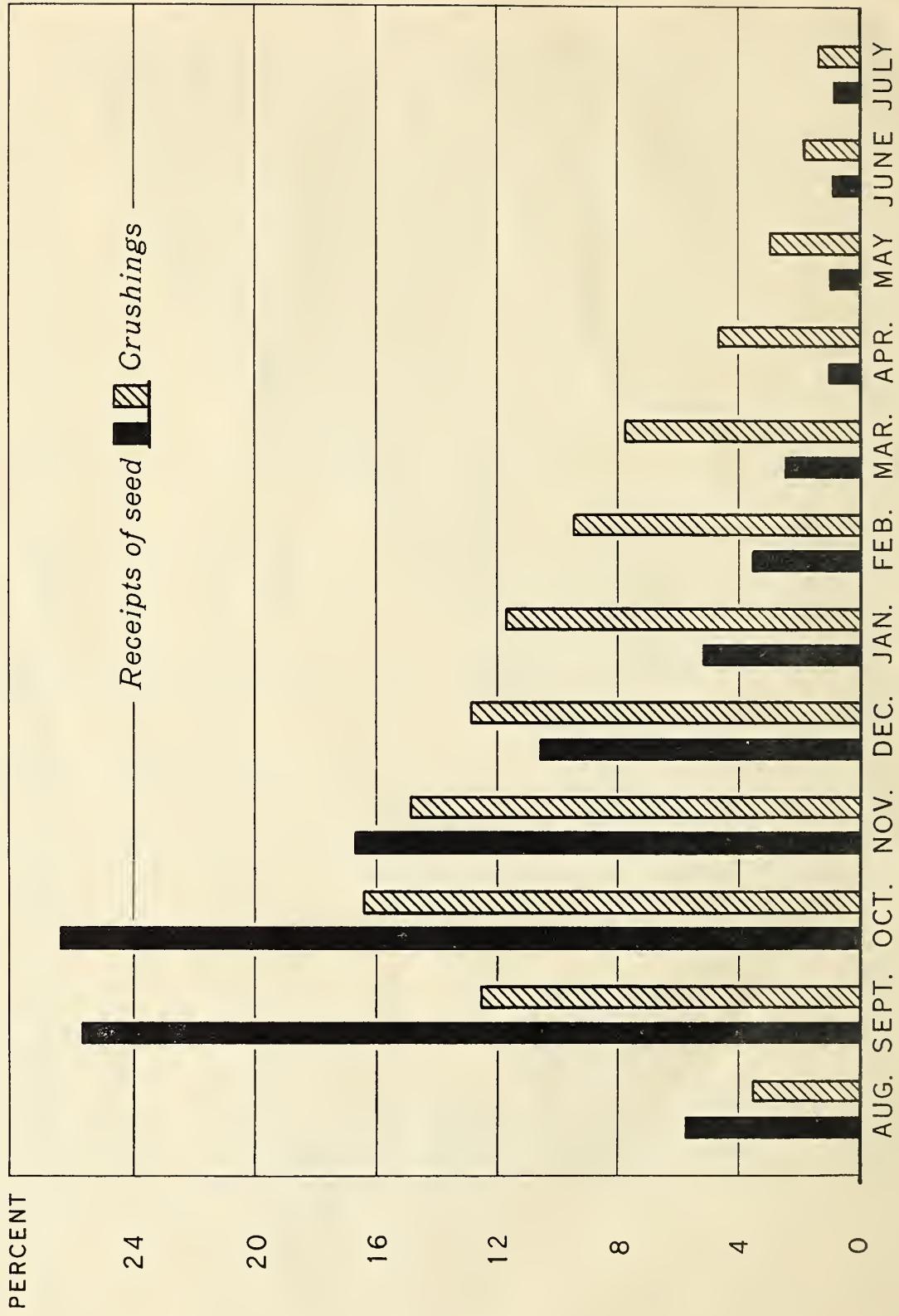


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FIGURE 1

AVERAGE MONTHLY PERCENTAGE OF COTTON SEED  
RECEIPTS AND CRUSHINGS, 1935-39

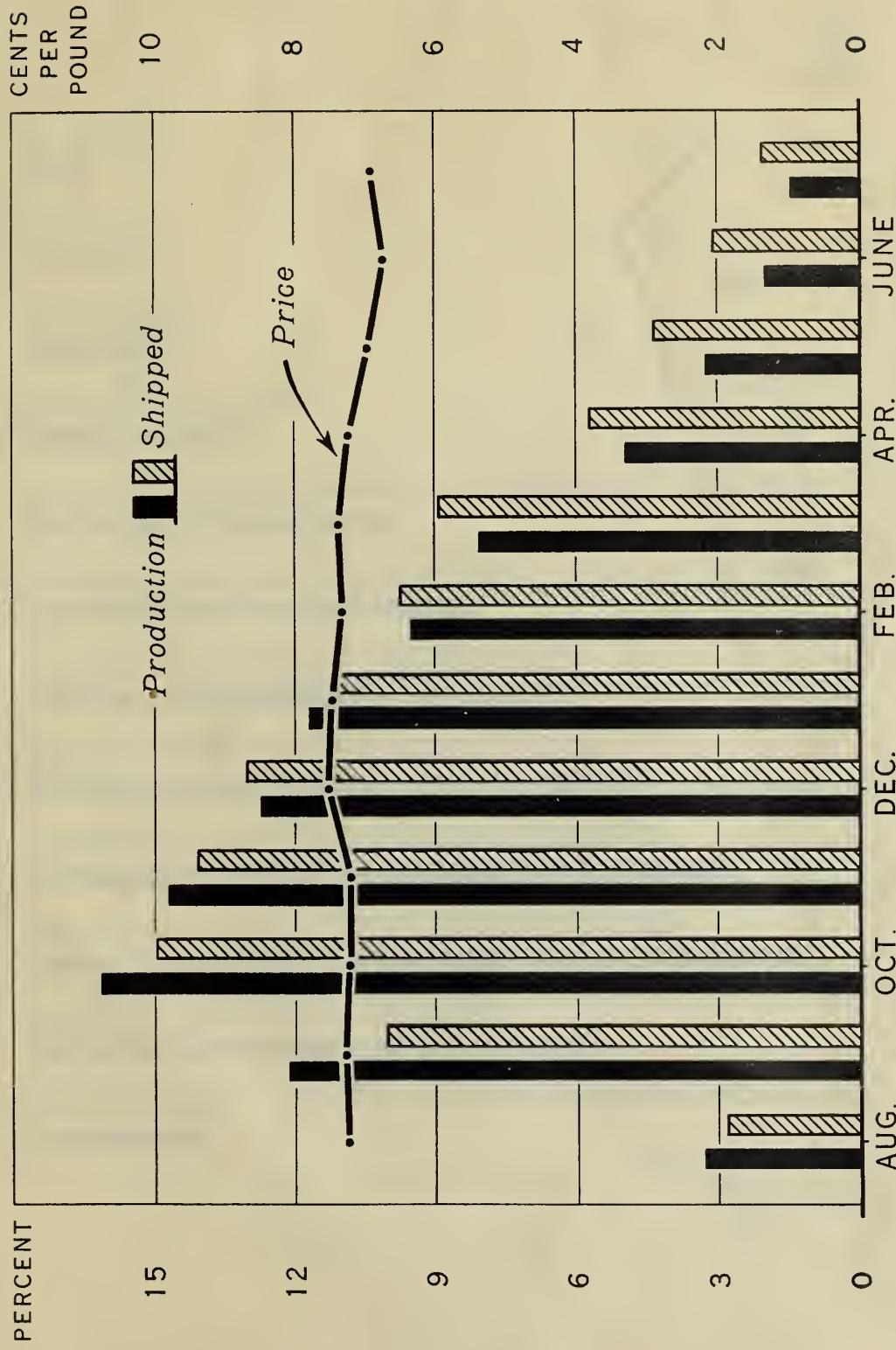


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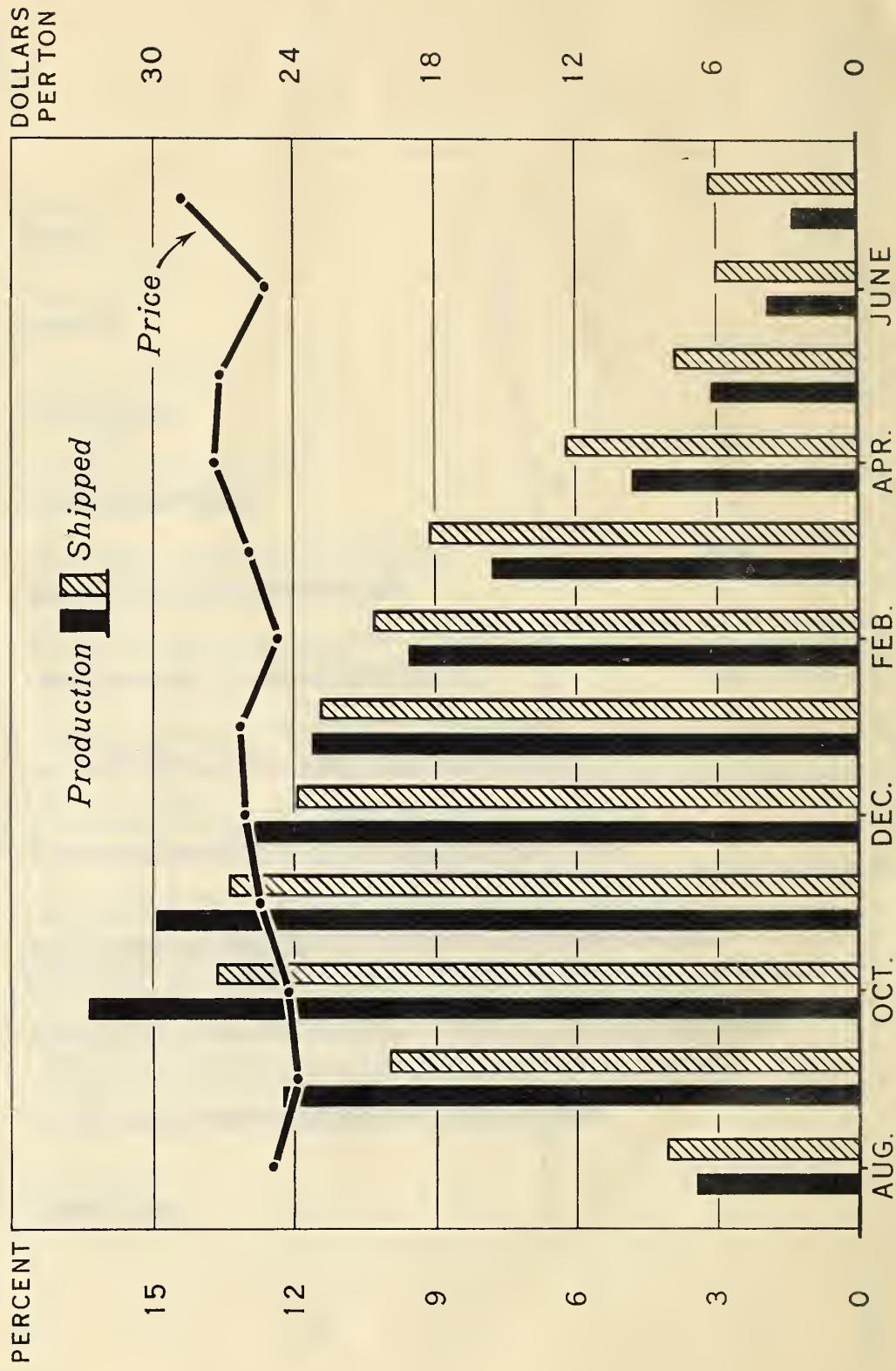
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FIGURE 2

AVERAGE MONTHLY PERCENTAGE OF OIL PRODUCED AND SHIPPED  
BY COTTONSEED OIL MILLS, AND AVERAGE MONTHLY PRICE  
OF PRIME CRUDE OIL SOUTHEAST, 1935-39



AVERAGE MONTHLY PERCENTAGE OF COTTONSEED CAKE AND MEAL  
PRODUCED AND SHIPPED, AND AVERAGE MONTHLY PRICE OF  
41% PROTEIN MEAL, MEMPHIS, TENN., 1935-39

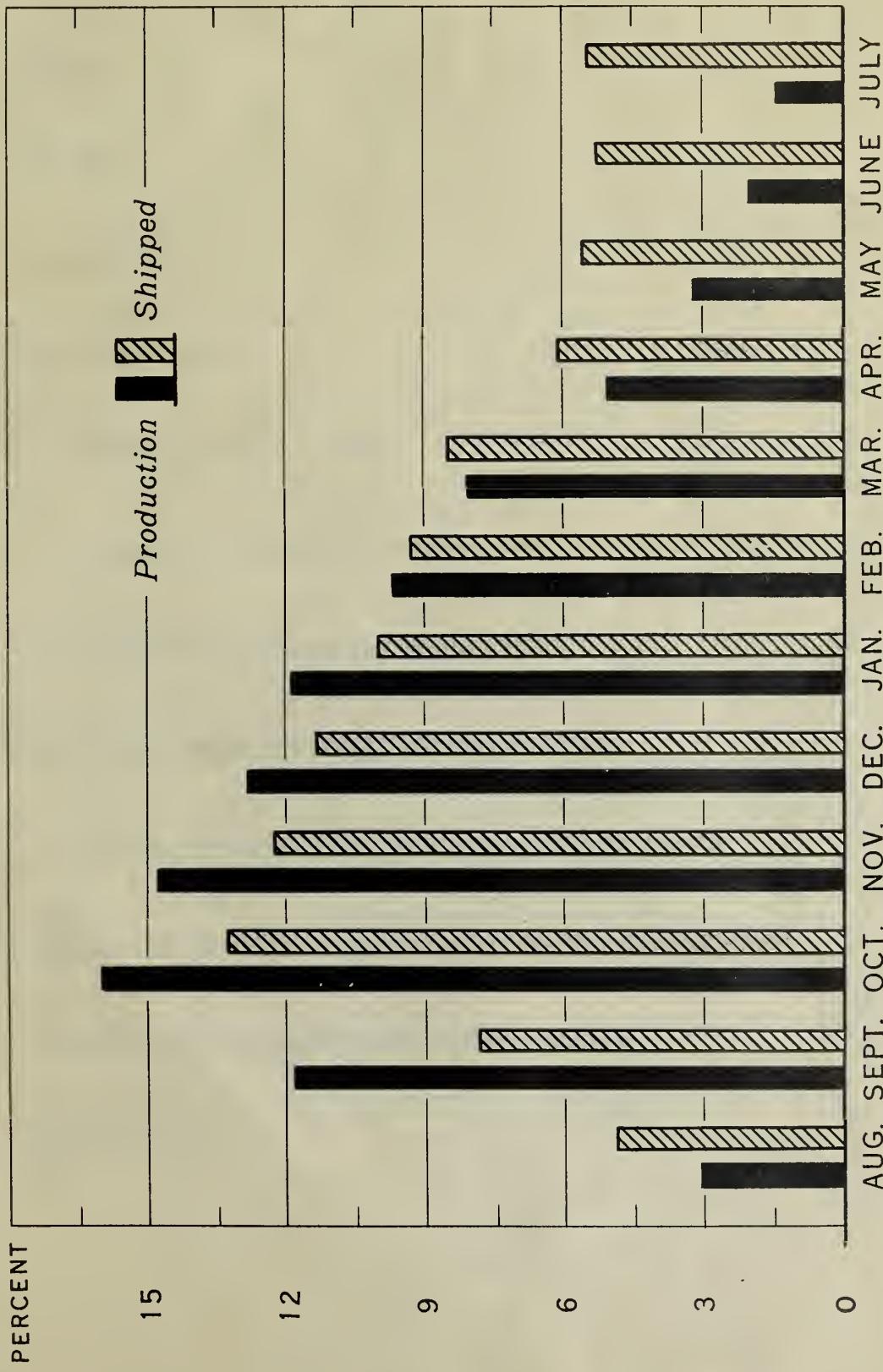


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FIGURE 4

AVERAGE MONTHLY PERCENTAGE OF COTTON LINTERS  
PRODUCED AND SHIPPED, 1935-39

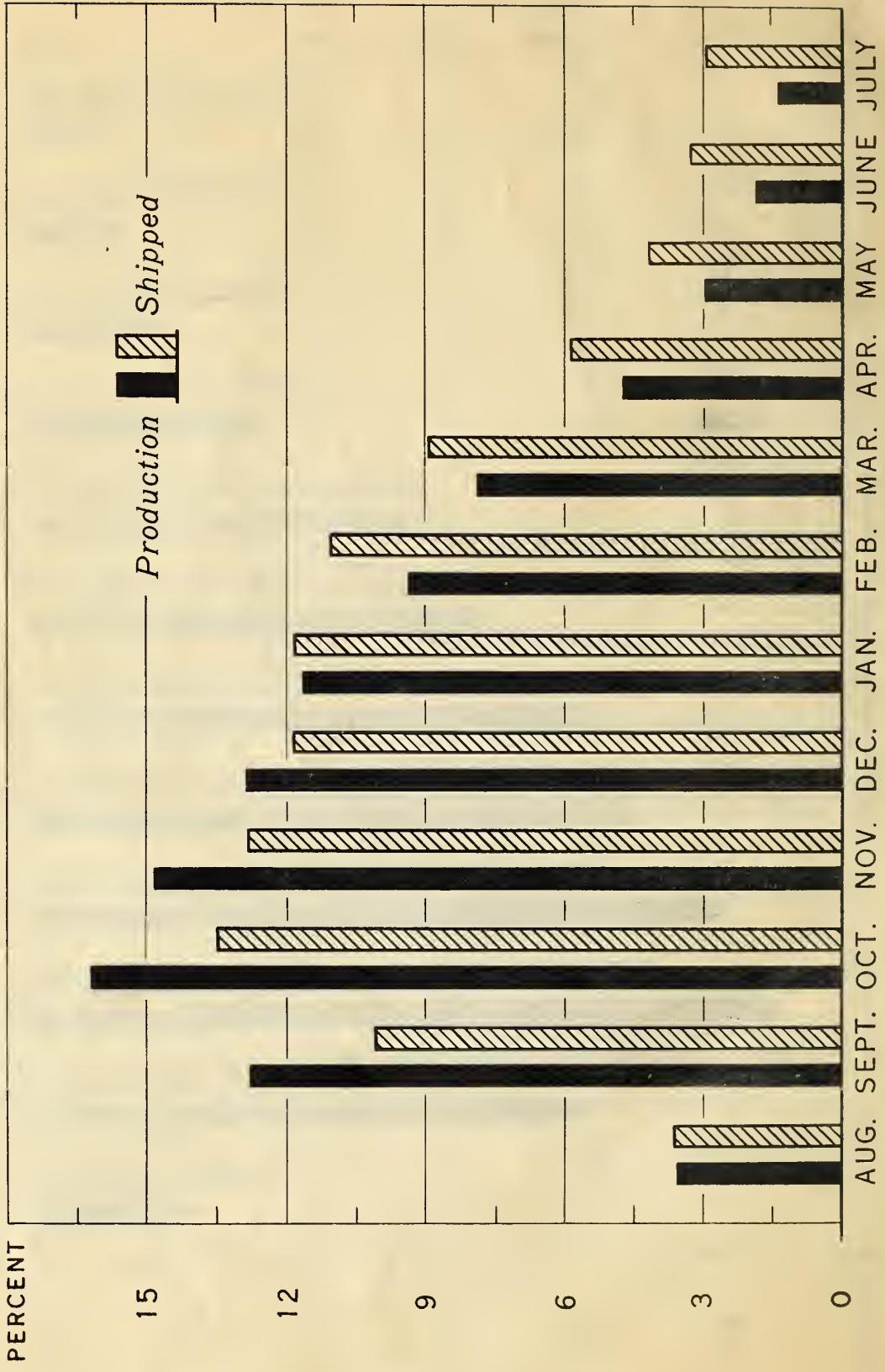


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FIGURE 5

AVERAGE MONTHLY PERCENTAGE OF COTTONSEED HULLS  
PRODUCED AND SHIPPED, 1935-39



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FIGURE 6